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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 09/214,519 | 01/07/1999 | TOSHIAKI HASHIZUME | 101850 | 8609 |
| 25944 | 7590 | 12/01/2004 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | LEROUX, ETIENNE PIERRE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2161 | |
| DATE MAILED: 12/01/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/214,519

Applicant(s)

HASHIZUME ET AL.

Examiner

Etienne P LeRoux

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2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 08162004.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Continued Examination

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/16/2004 has been entered.

Claims Status

Claims 20-44 are pending. Claims 1-19 have been canceled. Claims 20-44 are rejected in this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites "a plurality of optical modulation devices that modulate a light flux emitted from the light source according to image information." Furthermore, claim 20 recites "a transparent plate bonded to and in contact with substantially the entire at least one surface of the optical modulation device" and still further "a plurality of mounting frame plates that hold the

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optical modulation device and the transparent plate.” The scope of the invention cannot be determined because it is unclear whether applicant is claiming a single optical modulation device or a plurality of optical modulation devices.” For purposes of this Office Action, examiner will assume instant invention comprises a plurality of optical modulation devices.

Claim 20 recites “a plurality of fixed frame plates in a fixed contact with each light incident surface of the prism” and furthermore “a plurality of mounting frame plates that hold the optical modulation device and the transparent plate.” Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. According to applicant’s Fig 7, the omitted element is the intermediate frame plate which connects the fixed frame plate in contact with a light incident surface of the prism with the plurality of mounting frame plates that hold the optical modulation device.

Claims 21-32 are rejected for being dependent from a rejected base claim.

Claim 33 includes language similar to claim 20 and is rejected for the same reason.

Claims 34-44 are rejected for being dependent from a rejected base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20, 21, 23, 28, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,982,538 issued to Shikama et al (hereafter Shikama) and further in view of US Pat No 5,651,599 issued to Fujimori et al (hereafter Fujimori '599), as best examiner is able to ascertain.

Claim 20:

Shikama discloses a projector [Fig 1] comprising:

- a light source [Shikama, Fig 1, 18];
- a plurality of optical modulation devices [Shikama, Fig 1, 6R, 6G, 6B] that modulate a light flux emitted from the light source according to image information;
- a prism [Shikama, Fig 1, 8] that synthesizes the light flux modulated by the plurality of optical modulation devices;
- a projection unit [Shikama, Fig 1, 11] that magnifies and projects the light flux synthesized by the prism;
- a transparent plate [Shikama, Fig 2, 24] bonded to and in contact with at least one surface of the optical modulation device [Shikama, Fig 2, 23];

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- a plurality of fixed frame plates in a fixed contact with each light incident surface of the prism [Shikama, Fig 1];

Shikama discloses the elements of instant claim as noted above. Shikama fails to disclose a plurality of mounting frame plates that hold the optical modulation device, and the transparent plate, each mounting frame plate being detachably fixed to each fixed frame plate. Fujimori '599 discloses a plurality of mounting frame plates that hold optical modulation devices and other optical elements, each mounting frame plate being detachably fixed to each fixed frame plate [Fig 10]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shikama to include a plurality of mounting frame plates that hold optical modulation devices as taught by Fujimori '599 for the purpose of securing the optical devices to the lower chassis. The skilled artisan would have been motivated to improve the invention of Shikama per the above such that the optical elements would remain securely in position even if excessive force is applied to the outer case of the liquid crystal video projector and so that the optical elements can be removed and replaced [col 14, lines 27-33].

Claim 21:

The combination of Shikama and Fujimori '599 discloses a polarizer [Shikama, Fig 2, 22] bonded to the transparent plate [Shikama, Fig 2, 24].

Claim 23:

The combination of Shikama and Fujimori '599 discloses the transparent plate being formed on a light emitting surface of the optical modulation devices [Shikama, Figs 1 and 2].

Claim 28:

The combination of Shikama and Fujimori '599 discloses the mounting frame plate composed of a first member and a second frame member that sandwich the optical modulation device the transparent plate, and the fixed frame plate [Fujimori '599, Fig 10, 7a, 7b, 7c]

Claim 29:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above. Regarding claim 20, Shikama fails to disclose an intermediate frame plate disposed between the mounting frame plate and the fixed frame. However, Shikama does disclose a polarizer [Fig 2, 22] and a polarization switch [Fig 2, 7] between the light valve [Fig 2, 6] and the prism [Fig 2]. Fujimori '599 discloses a plurality of frames for optical devices including polarizers and light valves [Fig 10]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shikama to include an intermediate frame plate disposed between the mounting frame plate and the fixed frame plate as taught by Fujimori '599 for the purpose of maintaining the positions of the optical devices [Fujimori '599, col 14, lines 25-32]. The skilled artisan would have been motivated to improve the invention of Shikama per the above to prevent deviations in the positions of the optical devices and thereby projecting more beautiful pictures [Fujimori '599, col 14, lines 32-35].

Claim 32:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above. Furthermore, Fujimori '599 discloses a power supply unit [Fig 14, 95]; an interface circuit [Fig 14, 80], a control circuit [Fig 14, 100] that controls the optical modulation devices; and an outer casing [Fig 14, 70] that accommodates the light source, the plurality of optical modulation devices, the prism, the transparent plate, the plurality of fixed frame plates, the

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plurality of mounting frame plates, the power supply unit, the interface circuit, and the control circuit.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 3,910,682 issued to Arai et al (hereafter Arai).

Claim 22:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above. The combination of Shikama and Fujimori '599 fails to disclose said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection. Arai discloses said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection [Fig 2, 2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection as taught Arai for the purpose of omitting the washing step [col 2, lines 45-55].

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 4,715,686 issued to Iwashita et al (hereafter Iwashita), as best examiner is able to ascertain.

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Claim 24:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above. The combination of Shikama and Fujimori '599 fails to disclose an antireflection film formed on at least one surface of said transparent plate. Iwashita discloses an antireflection film formed on at least one surface of said transparent plate [Fig 1, 2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include an antireflection film formed on at least one surface of said transparent plate as taught by Iwashita in order to provide endurance against abrasion as well as superior visibility of display [col 2, lines 10-12].

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 5,508,834 issued to Yamada et al (hereafter Yamada), as best examiner is able to ascertain.

Claim 25:

The combination of Shikama and Fujimori '599 discloses the elements of 20 as noted above. The combination of Shikama and Fujimori '599 fails to disclose the transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit. Yamada discloses said transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit [col 4, lines 15-25]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include said

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transparent plate having a thickness and said projection unit having a focal depth, and the thickness of said transparent plate being set larger than the focal depth of said projection unit as taught by Yamada for the purpose of preventing dust or fluff causing an adverse effect on the image quality [col 4, lines 15-24].

Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 5,508,834 issued to Yamada et al (hereafter Yamada), as best examiner is able to ascertain.

Claim 26:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above. The combination of Shikama and Fujimori '599 fails to disclose a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer. Yamada discloses a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer [col 6, line 60 and Fig 7, 9 and Fig 7, 7 and Fig 2, 209]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with

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the optical axis of said polarizer as taught by Yamada for the purpose of providing a projection apparatus.

Claim 27:

The combination of Shikama, Fujimori '599 and Yamada discloses the elements of claim 26 as noted above. Furthermore, Yamada discloses said polarizer comprising a polarizing layer and a pair of substrates that sandwich said polarizing layer and are made of a substrate material, and said transparent plate being made of the substrate material used in making said substrates [Fig 6, 8 and Fig 6, 6 and Fig 6, 2]

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 5,399,850 issued to Nagatani et al (hereafter Nagatani) as best examiner is able to ascertain.

Claim 30:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above but fails to disclose the mounting frame plate being made of a resin containing glass fiber. Nagatani discloses the mounting frame plate is made of a resin containing glass fiber [col 9, lines 25-30]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include the mounting frame plate being made of a resin containing glass fiber as taught by Nagatani for the purpose of matching the coefficients of linear expansion such that distortion does not arise in the projected image.

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Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 5,806,950 issued to Gale et al (hereafter Gale), as best examiner is able to ascertain.

Claim 31:

The combination of Shikama and Fujimori '599 discloses the elements of claim 20 as noted above but fails to disclose the mounting frame plate being made of metal. Gale discloses the mounting frame plate is made of metal [Fig 15A]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include the mounting frame plate being made of metal as taught by Gale for the purpose of using a material that is economically very competitive.

Claims 33-35, 40, 41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama and Fujimori '599 and further in view of US Pat No 6,007,205 issued to Fujimori (hereafter Fujimori '205), as best examiner is able to ascertain.

Claim 33, 35 and 44:

Shikama discloses a projector [Fig 1] comprising:

- a light source [Shikama, Fig 1, 18];
- a plurality of optical modulation devices [Shikama, Fig 1, 6R, 6G, 6B] that modulate a light flux emitted from the light source according to image information;
- a prism [Shikama, Fig 1, 8] that synthesizes the light flux modulated by the plurality of optical modulation devices;

- a projection unit [Shikama, Fig 1, 11] that magnifies and projects the light flux synthesized by the prism;
- a transparent plate [Shikama, Fig 2, 24] bonded to and in contact with at least one surface of the optical modulation device [Shikama, Fig 2, 23];
- a plurality of fixed frame plates in a fixed contact with each light incident surface of the prism [Shikama, Fig 1];

Shikama discloses the elements of instant claim as noted above. Shikama fails to disclose a plurality of mounting frame plates that hold the optical modulation device, and the transparent plate, each mounting frame plate being detachably fixed to each fixed frame plate. Fujimori '599 discloses a plurality of mounting frame plates that hold optical modulation devices and other optical elements, each mounting frame plate being detachably fixed to each fixed frame plate [Fig 10]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shikama to include a plurality of mounting frame plates that hold optical modulation devices as taught by Fujimori '599 for the purpose of securing the optical devices to the lower chassis. The skilled artisan would have been motivated to improve the invention of Shikama per the above such that the optical elements would remain securely in position even if excessive force is applied to the outer case of the liquid crystal video projector and so that the optical elements can be removed and replaced [col 14, lines 27-33].

The combination of Shikama and Fujimori '599 discloses the elements of claim 33 as noted above. The combination of Shikama and Fujimori '599 fails to disclose a partition that surrounds the plurality of optical modulation devices and the prism via an air layer, the air layer

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separating the plurality of optical modulation devices and the prism from the light source and the projection unit, the partition having a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device, and a light outgoing window that emits the flux modulated by the at least one optical modulation device therefrom [Fig 12]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama and Fujimori '599 to include a partition that surrounds the plurality of optical modulation devices and the prism via an air layer, the air layer separating the plurality of optical modulation devices and the prism from the light source and the projection unit, the partition having a transparent plate fitted in a light incident window corresponding to a light incident surface of at least one optical modulation device, and a light outgoing window that emits the flux modulated by the at least one optical modulation device therefrom as taught by Fujimori '205 for the purpose of providing cooling by circulating air without deposit dust and debris on the optical elements.

Claim 34:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above. Furthermore, Fujimori '205 discloses a fan that circulates air located inside the partition [Fig 12].

Claim 40:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above. Furthermore, Fujimori '599 discloses the mounting frame plate composed of a first frame member and a second frame member that sandwich the optical modulation device and the transparent plate, the fixed frame plate [Figs 10 and 11].

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Claim 41:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above. Regarding claim 20, Shikama fails to disclose an intermediate frame plate disposed between the mounting frame plate and the fixed frame. However, Shikama does disclose a polarizer [Fig 2, 22] and a polarization switch [Fig 2, 7] between the light valve [Fig 2, 6] and the prism [Fig 2]. Fujimori '599 discloses a plurality of frames for optical devices including polarizers and light valves [Fig 10]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shikama to include an intermediate frame plate disposed between the mounting frame plate and the fixed frame plate as taught by Fujimori '599 for the purpose of maintaining the positions of the optical devices [Fujimori '599, col 14, lines 25-32]. The skilled artisan would have been motivated to improve the invention of Shikama per the above to prevent deviations in the positions of the optical devices and thereby projecting more beautiful pictures [Fujimori '599, col 14, lines 32-35].

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama, Fujimori '599 and Fujimori '205 and further in view of US Pat No 5,399,850 issued to Nagatani et al (hereafter Nagatani) as best examiner is able to ascertain.

Claim 42:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above but fails to disclose the mounting frame plate being made of a resin containing glass fiber. Nagatani discloses the mounting frame plate is made of a resin containing glass fiber [col 9, lines 25-30]. It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to modify the combination of Shikama, Fujimori '599 and Fujimori '205 to include the mounting frame plate being made of a resin containing glass fiber as taught by Nagatani for the purpose of matching the coefficients of linear expansion such that distortion does not arise in the projected image.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama, Fujimori '599 and Fujimori '205 and further in view of US Pat No 5,806,950 issued to Gale et al (hereafter Gale), as best examiner is able to ascertain.

Claim 43:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above but fails to disclose the mounting frame plate being made of metal. Gale discloses the mounting frame plate is made of metal [Fig 15A]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama, Fujimori '599 and Fujimori '205 to include the mounting frame plate being made of metal as taught by Gale for the purpose of using a material that is economically very competitive.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama, Fujimori '599 and Fujimori '205 and further in view of US Pat No 3,910,682 issued to Arai et al (hereafter Arai).

Claim 36:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above. The combination of Shikama, Fujimori '599 and Fujimori '205 fails to disclose said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection. Arai discloses said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection [Fig 2, 2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama, Fujimori '599 and Fujimori '205 to include said transparent plate having a surface and the surface of said transparent plate being coated with a surface active agent, or treated for electrostatic protection as taught Arai for the purpose of omitting the washing step [col 2, lines 45-55].

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama, Fujimori '599 and Fujimori '205 and further in view of US Pat No 4,715,686 issued to Iwashita et al (hereafter Iwashita), as best examiner is able to ascertain.

Claim 37:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 20 as noted above. The combination of Shikama, Fujimori '599 and Fujimori '205 fails to disclose an antireflection film formed on at least one surface of said transparent plate. Iwashita discloses an antireflection film formed on at least one surface of said transparent plate [Fig 1, 2]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama, Fujimori '599 and Fujimori '205 to include an

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antireflection film formed on at least one surface of said transparent plate as taught by Iwashita in order to provide endurance against abrasion as well as superior visibility of display [col 2, lines 10-12].

Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shikama, Fujimori '599 and Fujimori '205 and further in view of US Pat No 5,508,834 issued to Yamada et al (hereafter Yamada), as best examiner is able to ascertain.

Claim 38:

The combination of Shikama, Fujimori '599 and Fujimori '205 discloses the elements of claim 33 as noted above. The combination of Shikama and Fujimori '599 fails to disclose a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer. Yamada discloses a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said transparent plate substantially aligns with the optical axis of said polarizer [col 6, line 60 and Fig 7, 9 and Fig 7, 7 and Fig 2, 209]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Shikama, Fujimori '599 and Fujimori '205 to include a polarizer having an optical axis interposed between said transparent plate and said projection unit, said transparent plate being made of a drawing resin and having an optical axis, and the optical axis of said

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transparent plate substantially aligns with the optical axis of said polarizer as taught by Yamada for the purpose of providing a projection apparatus.

Claim 39:

Shikama discloses a transparent plate [Shikama, Fig 2, 24] bonded to and in contact with at least one surface of the optical modulation device [Shikama, Fig 2, 23];

Response to Arguments

Applicant's arguments filed 8/16/2004 have been fully considered but they are not persuasive.

Applicant states in the fourth paragraph on page 7, "Applicants respectfully submit that none of the applied art, alone or in combination, discloses or suggests all the features of new claims 20-44. Examiner is not persuaded. Applicant is referred to supra Office Action where all elements of the new claims are rejected over existing prior art and new prior art.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (571) 272-4022. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (571) 272-4023.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Patent related correspondence can be forwarded via the following FAX number (703) 872-9306

Etienne LeRoux

11/24/2004



SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100